Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended): A training system for teaching the use of night vision goggles comprising:

a. a pair of simulated night vision goggles;

b. an image generation system generating three separate high fidelity, infrared, computer radiated terrain images, each computer radiated terrain image allocated to a portion of a total dynamic range of irradiance and driven by successively higher order bytes of digital video, wherein said image generation system includes a graphics generator, and wherein said image generation system is separate from said pair of simulated night vision goggles providing off-helmet image generation;

c. a second system in communication with said image generation system including weighted neutral density filters that optically combine the outputs of said three infrared computer radiated terrain images and said second system providing each of said computer radiated terrain images simultaneously to stimulate an image intensifier tube to provide about 200 dB dynamic range of irradiance and to provide sufficient dynamic range of irradiance to ~~an~~ said image intensifier tube to simulate direct viewing of bright lights; and

d. a third system for scan converting a resulting image generated at the output of said image intensifier tube for display on said simulated goggles including a high-resolution video camera to preserve the resolution and dynamic range of said image.

2. (canceled)

3. (previously presented): The training system in accordance with claim 1 including said third system for scan converting said resulting image generated at the output of said image intensifier tube for projecting said image on a display screen using said high-resolution video camera.

4. (previously presented): The training system in accordance with claim 1 wherein said second system includes:

an allocation system allocating each of said three infrared computer radiated terrain images to a preselected portion or all of the total irradiance range representing scene elements of low, medium and high light intensity.

5. (previously presented): The training system in accordance with claim 1 including a head tracking system for providing a stable image to said graphics generator of said image generation system regardless of the simulated night vision goggle line of sight.

6. (previously presented): The training system in accordance with claim 1 wherein said image generation system and said second system are provided in a light tight package to maintain contrast, wherein said light tight package includes light baffles and optical coatings, and wherein said light tight package is separate from said simulated goggles.

7. (currently amended): A training system for teaching the use of night vision goggles comprising:

a. a pair of simulated night vision goggles;

b. an image generation system generating high fidelity, infrared, terrain simulation images and providing three separate 12-bit video

signals as inputs, wherein said system is separate from said simulated goggles;

c. a second system in communication with said image generation system including multiple infrared computer radiated terrain images, each of said infrared computer radiated terrain images being driven by a distinct one of ~~weighted neutral density filters that optically combine the outputs of~~ said three 12-bit video signals, wherein each of said three 12-bit video signals is allocated to a portion of a total dynamic range of irradiance and said second system providing each of said infrared computer radiated terrain images simultaneously to stimulate an image intensifier tube to provide about 200 dB dynamic range of irradiance and to provide sufficient dynamic range of irradiance to ~~an~~ said image intensifier tube to simulate the entire range of natural nighttime terrain irradiance including bright lights; and

d. a third system for scan converting a resulting image generated at the output of said image intensifier tube for display on said simulated goggles including a high-resolution video camera to preserve the resolution and dynamic range of said image.

8. (canceled)

9. (previously presented): A training system in accordance with claim 7 including said third system for scan converting said resulting image generated at the output of said image intensifier tube and projecting said image on a display screen using said high-resolution video camera.

10. (previously presented): A training system in accordance with claim 7 wherein said communication system includes:

an allocation system allocating each output of said three 12-bit video signals to a preselected portion or all of the total irradiance range representing scene elements of low, medium and high light intensity.

11. (previously presented): A training system in accordance with claim 7 including a head tracking system for providing a stable image regardless of the simulated night vision goggle line of sight.

12. (currently amended): A training system for teaching the use of night vision goggles comprising:

a. a pair of simulated night vision goggles;

b. an image generation system generating three separate high fidelity, infrared, computer radiated terrain images and providing three separate 12-bit video signals as inputs, each of said computer radiated terrain images being driven by a distinct one of said three 12-bit video signals, wherein each of said three 12-bit video signals is allocated to a portion of a total dynamic range of irradiance, wherein said image generation system includes a graphics generator, and wherein said image generation system is separate from said pair of simulated night vision goggles providing off-helmet image generation;

c. a second system in communication with said image generation system including weighted neutral density filters that optically combine the outputs of said three 12-bit video signals and said second system providing each of said computer radiated terrain images simultaneously to stimulate an image intensifier tube to provide about 200 dB dynamic range of irradiance and to provide sufficient dynamic range of irradiance to ~~an~~ said image intensifier tube ~~to increase the dynamic range needed~~ to reproduce effects to simulate direct viewing of bright lights,

said second system including an allocation system allocating each output of said three 12-bit video signals to a preselected portion or all of the total irradiance range representing scene elements of low, medium and high light intensity;

d. a high-resolution video camera for scan converting the resultant image at the output of said image intensifier tube to preserve its resolution and dynamic range and to display said image on said simulated

goggles; and

e. a head tracking system for providing a stable image regardless of the simulated night vision goggle line of sight;

said image generation system and said second system are provided in a light tight package to maintain contrast.

13. (canceled)

14. (previously presented): A training system in accordance with Claim 12 including a video system displaying the resultant image generated at the output of said image intensifier tube on a display server.

15. (currently amended): A method for simulating night vision as seen through a pair of goggles comprising the steps of:

a. providing a pair of simulated night vision goggles,

b. generating three separate high fidelity, infrared, computer radiated terrain images, off-helmet separate from said simulated goggles,

c. driving each computer radiated terrain image by successively higher order bytes of digital video allocated to different portions of a total dynamic range of irradiance

[[c]]d. optically combining ~~the outputs~~ each of said three computer radiated terrain images to simultaneously stimulate an image intensifier tube to provide about 200 dB dynamic range of irradiance ~~through weighted neutral density filters~~;

[[d]]e. simulating the entire range of natural night time terrain irradiance including bright lights using said three computer radiated terrain images , and

[[e]] f. scan converting the resultant image generated to video for display through said simulated goggles.

16. (previously presented): The method of claim 15 wherein said scan conversion includes the steps of:

a. allocating each output of said three infrared computer radiated terrain images to a preselected portion of the total irradiance range representing scenic elements of low, medium and high light intensity,

b. scanning the converted image to preserve its resolution and dynamic range.

17. (original): The method of Claim 16 including the step of:

rendering the generated image stable regardless of the simulated night vision line of sight.

18. (original): The method of Claim 17 including the step of:

maintaining contrast of said generated image.

19. (original): The method of Claim 18 including the step of:

maintaining the contrast of said generated image by providing the generating image in a light tight package.

20. (original): The method of Claim 15 including the step of:

rendering the generated image stable regardless of the simulated night vision line of sight.

21. (original): The method of Claim 15 including the step of:

maintaining contrast of said generated image.

22. (original): The method of Claim 21 including the step of:

maintaining the contrast of said generated image by providing the generating image in a light tight package.